Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Original) A network architecture comprising:

a transport layer including an optical network;

at least one node having a large packet switch to couple to the transport layer and to an access layer, the large packet switch to aggregate a plurality of services from the access layer and to perform packet level grooming; and

wherein restoration is performed by the optical network.

2.   (Original) The network architecture of claim 1, wherein the optical network is an optical ring network including at least one optical switch.

3.   (Original) The network architecture of claim 2, wherein restoration is performed at a layer-0 (optical layer) of the optical ring network.

4.   (Original) The network architecture of claim 1, wherein the optical network is a bi-directional line-switched ring (BLSR) utilizing a Synchronous Optical Network (SONET) standard.

5.   (Original) The network architecture of claim 4, wherein restoration is performed by a layer-1 (SONET layer).

6.   (Original) The network architecture of claim 1, wherein the access layer includes at least one of a Time Division Multiplexed (TDM) voice service, a Internet Protocol (IP) service, or an Asynchronous Transfer Mode (ATM) service.

7.   (Original) The network architecture of claim 1, wherein the access layer includes a leased line service that is provided and restored through an optical switch of the transport layer.

8.   (Original) The network architecture of claim 1, further comprising selecting optimized core node locations for the placement of core nodes based upon a cost optimization of an aggregated plurality of services aggregated by the large packet switch, wherein at least one core node includes a large packet switch.

9.   (Original) The network architecture of claim 8, further comprising determining an optimized converged optical network transport layer design for the aggregated plurality of services based upon routed transport demands of the aggregated plurality of services.

10.   (Original) The network architecture of claim 8, further comprising determining an optimized access layer network design for the aggregated plurality of services by determining an optimal number of access devices and an optimal sizing of the access devices for each service.

11-17. (Canceled)

18.   (Original) A method for designing a network architecture comprising:
provisioning an optical network as part of a transport layer;
coupling at least one node having a large packet switch to the transport layer and to an access layer;
aggregating a plurality of services from the access layer with the large packet switch;
performing packet level grooming with the large packet switch; and
performing restoration utilizing the optical network.

19.   (Original) The method of claim 18, wherein the optical network is an optical ring network including at least one optical switch.

20.   (Original) The method of claim 19, wherein restoration is performed at a layer-0 (optical layer) of the optical ring network.

21.   (Original) The method of claim 18, wherein the optical network is a bi-directional line-witched ring (BLSR) utilizing a Synchronous Optical Network (SONET) standard.

22.   (Original) The method of claim 21, wherein restoration is performed by a layer-1 (SONET layer).

23.   (Original) The method of claim 18, wherein the access layer includes at least one of a Time Division Multiplexed (TDM) voice service, a Internet Protocol (IP) service, or an Asynchronous Transfer Mode (ATM) service.

24.   (Original) The method of claim 18, wherein the access layer includes a leased line service that is provided and restored through an optical switch of the transport layer.

25.   (Original) The method of claim 18, further comprising selecting optimized core node locations for the placement of core nodes based upon a cost optimization of an aggregated plurality of services aggregated by the large packet switch, wherein at least one core node includes a large packet switch.

26.   (Original) The method of claim 25, further comprising determining an optimized converged optical network transport layer design for the aggregated plurality of services based upon routed transport demands of the aggregated plurality of services.

27.   (Original) The method of claim 25, further comprising determining an optimized access layer network design for the aggregated plurality of services by determining an optimal number of access devices and an optimal sizing of the access devices for each service.

28-34. (Canceled)